



CPSC203 – Introduction to Problem Solving and Using Application Software

Fall 2009

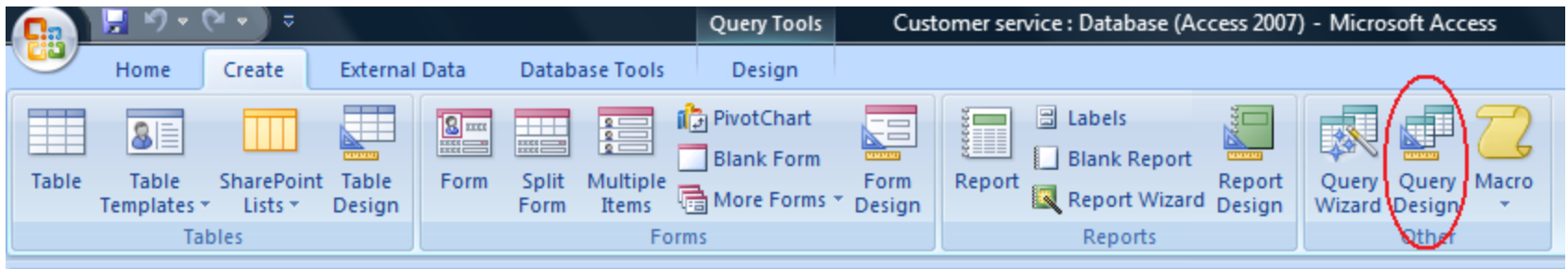
Tutorial 25, Mehrdad Nurolahzade

Introduction

- Single-table queries
- Table relationships
- Multi-table queries
- Aggregate queries

Single-Table Queries (1)

- Select Create > Query Design



- From the dialog box select a table/query and click on the **Add** button.
- Click **Close** to dismiss the dialog box.

Single-Table Queries (2)

- Select fields
- Modify sort order
- Modify selection criteria
- Switch to **Datasheet View** to see query results
- Switch to **SQL View** to see query statement
- Switch to **Design View** to modify query

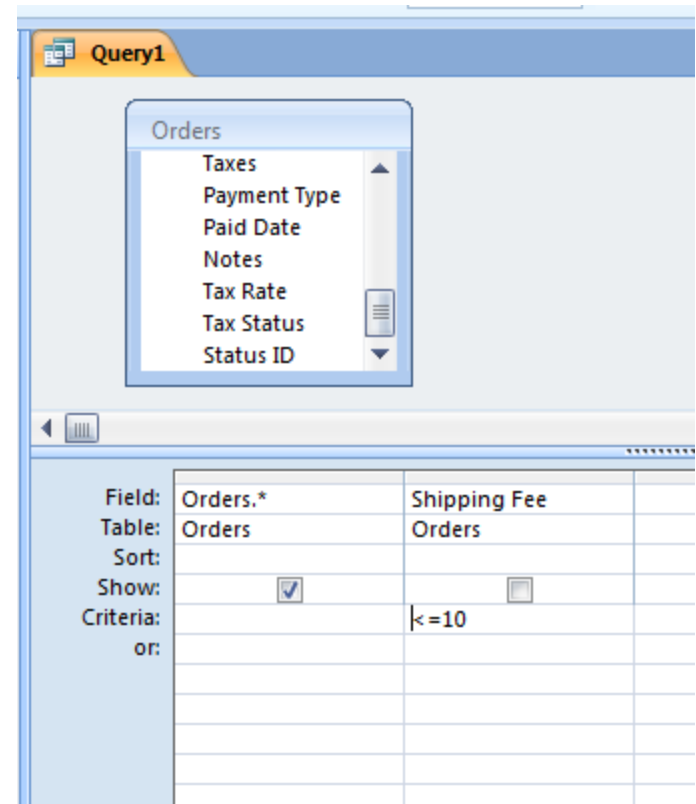
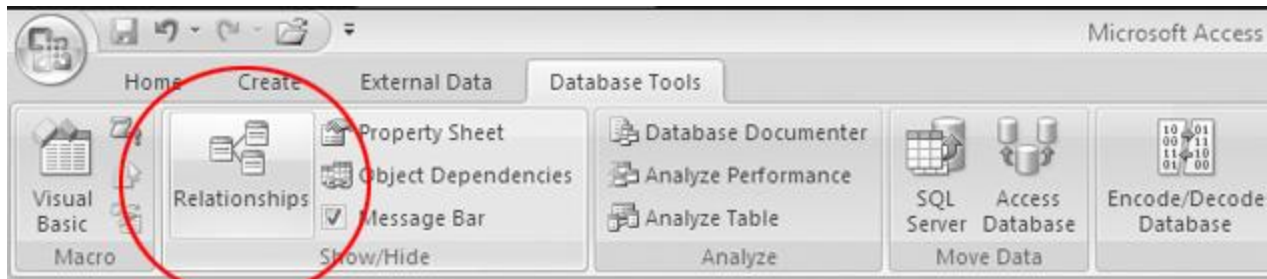


Table Relationships

- Relationships are essentially links that associate a field in one table with a field in another table.
- Creating table relationships are important if we want to be able perform queries with multiple tables.

Creating Relationships (1)

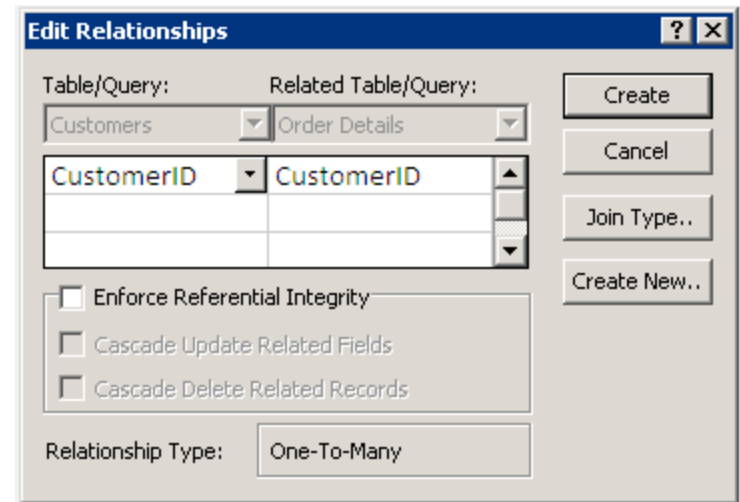
- Select Database Tools > Relationships



- From the dialog box select a tables/queries and click on the **Add** button.
- Click **Close** to dismiss the dialog box.

Creating Relationships (2)

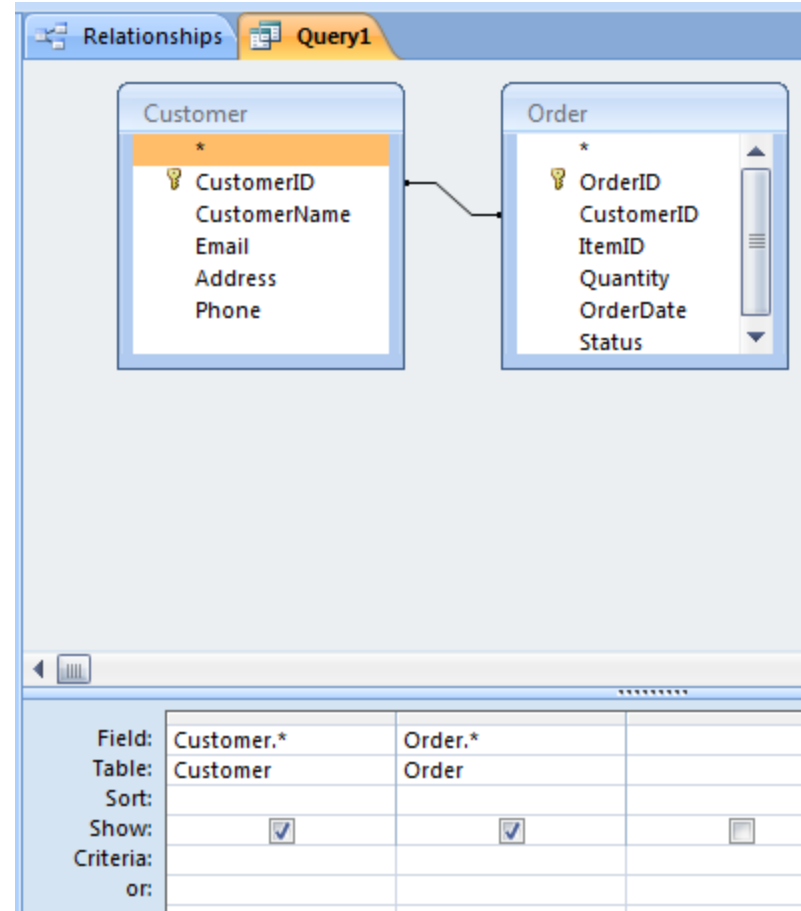
- Determines the fields in two tables that will participate in the relationship.
- Click the **Primary Key** and drag it into the **Foreign Key**.
- In **Edit Relationships** window press **Create**.



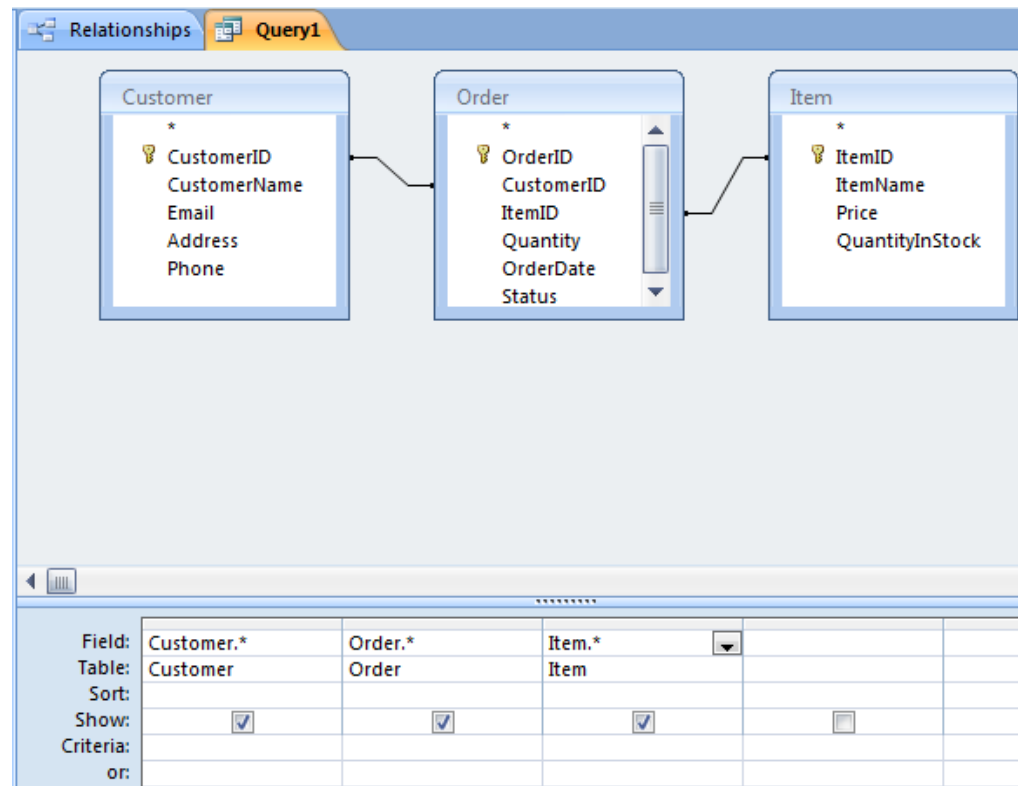
Multi-Table Queries (1)

- Just like Single-Table Queries but this time add multiple tables/queries.

```
SELECT *  
FROM Customer, Order  
WHERE Customer.CustomerID=Order.CustomerID
```

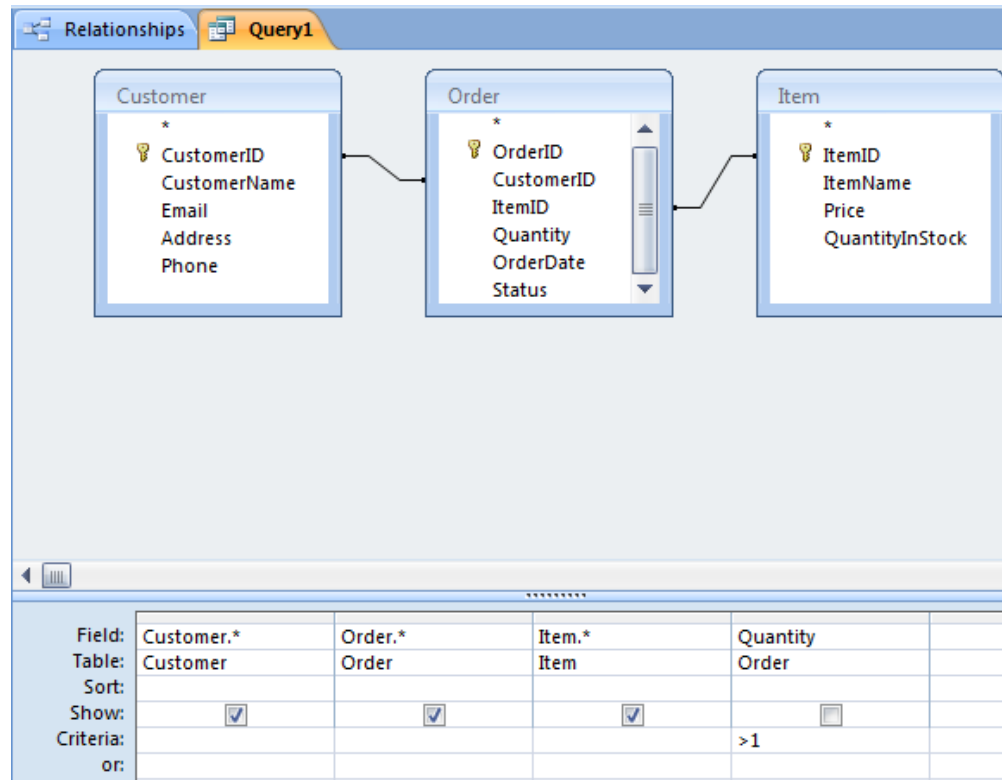


Multi-Table Queries (2)



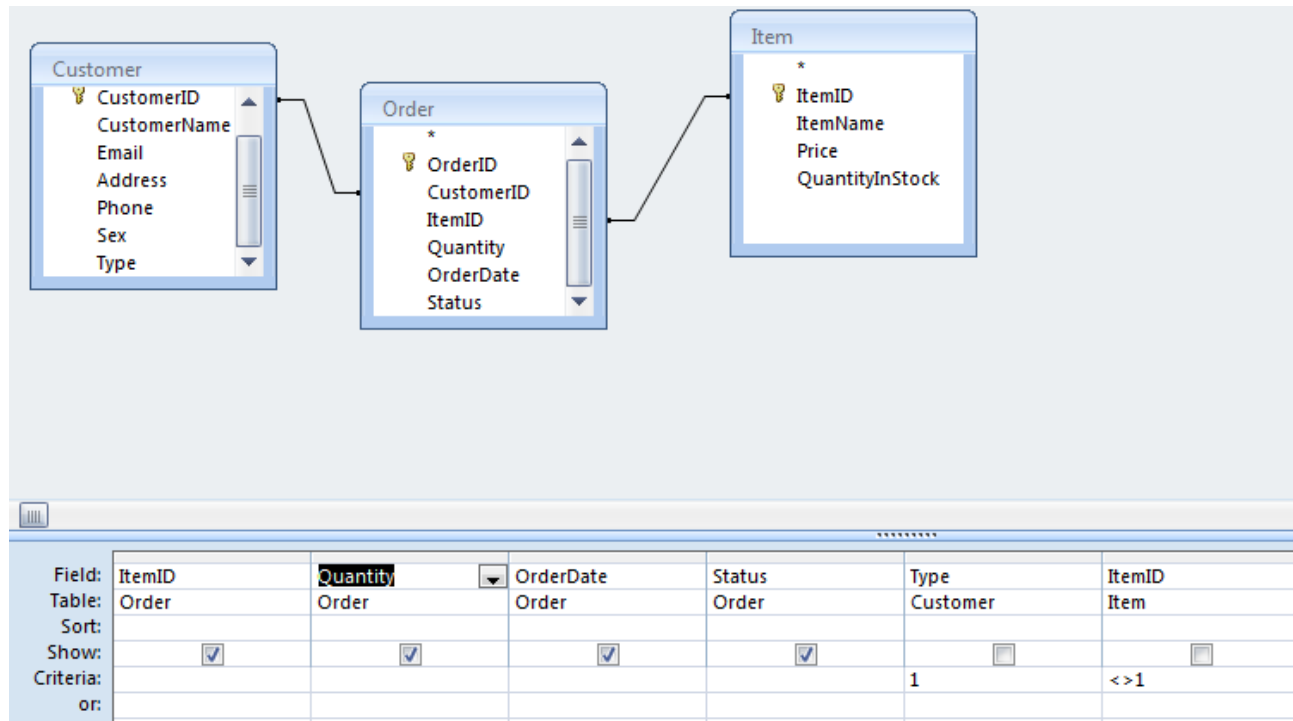
```
SELECT *  
FROM Customer, Order, Item  
WHERE Customer.CustomerID=Order.CustomerID AND Order.ItemID=Item.ItemID
```

Multi-Table Queries (3)



```
SELECT *  
FROM Customer, Order, Item  
WHERE Customer.CustomerID=Order.CustomerID AND Order.ItemID=Item.ItemID AND  
       Order.Quantity>1
```

Multi-Table Queries (3)



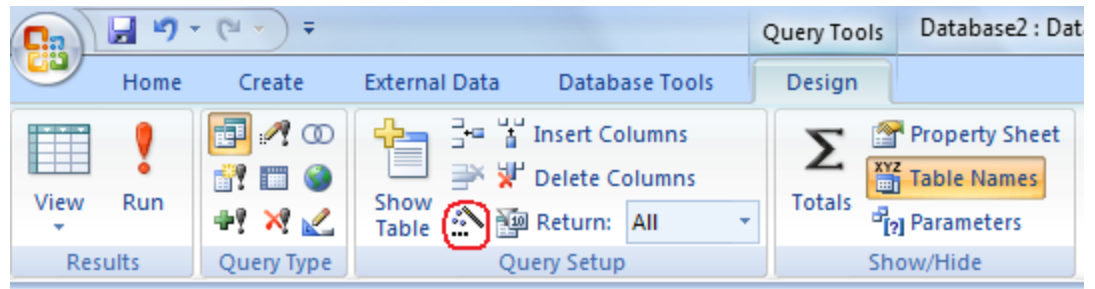
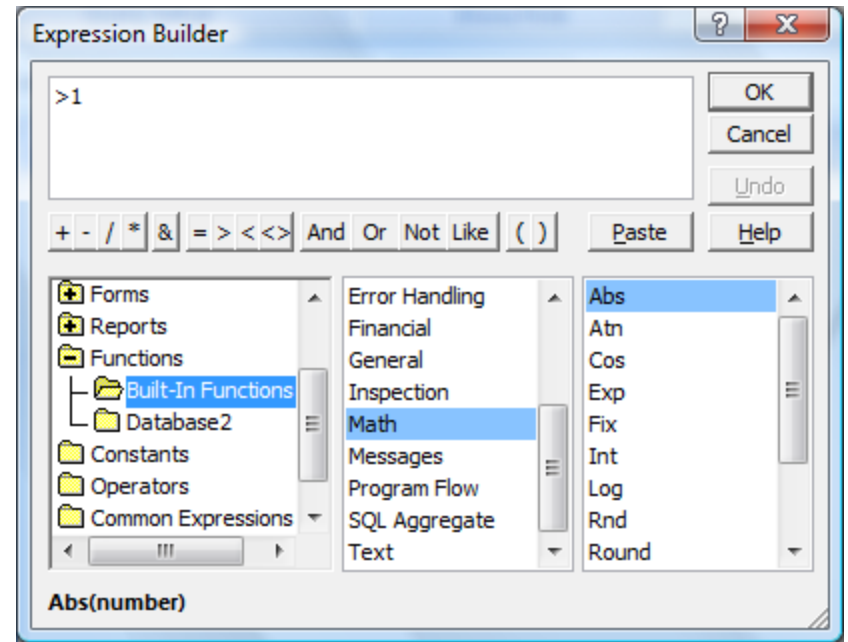
```
SELECT Order.ItemID, Order.Quantity, Order.OrderDate, Order.Status
FROM Customer, Order, Item
WHERE Customer.CustomerID=Order.CustomerID AND Order.ItemID=Item.ItemID AND
       Customer.Type=1 AND Item.ItemID<>1
```

Expression Builder

- Right click on a field and select **Build** from the context menu.

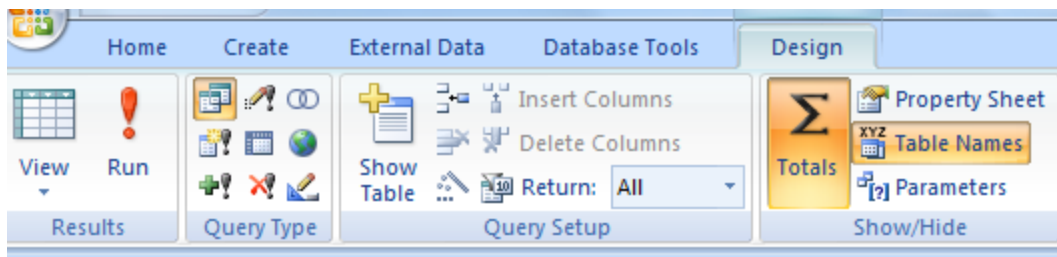
OR

- Select Expression Builder icon from **Design** menu.

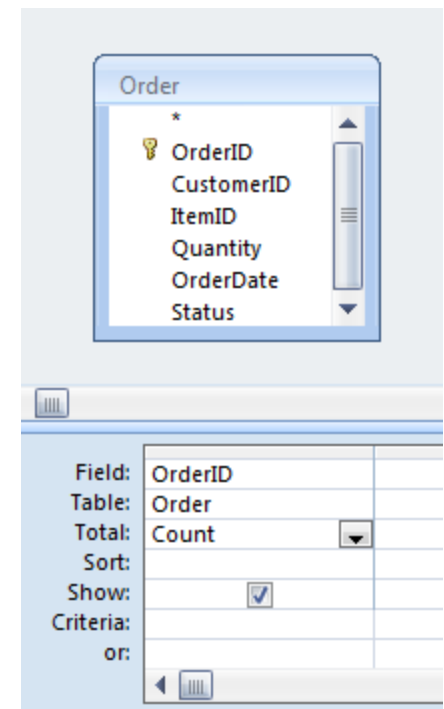


Aggregate Queries (1)

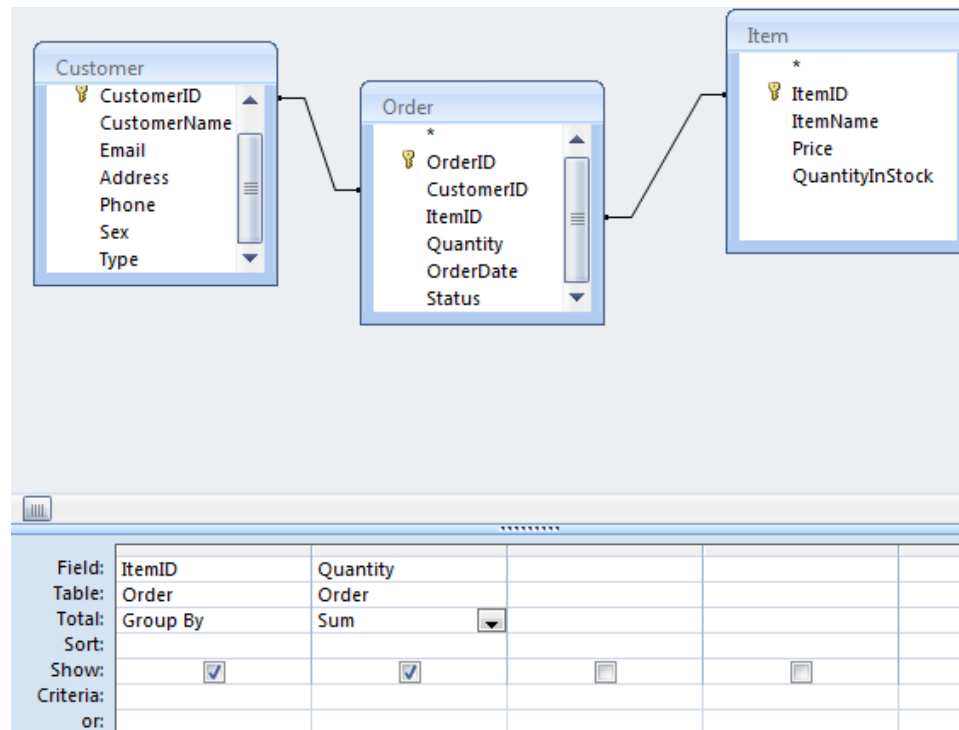
- Aggregate queries perform calculation on one or more fields.



```
SELECT Count (Order.OrderID) AS CountOfOrder
FROM ORDER
```

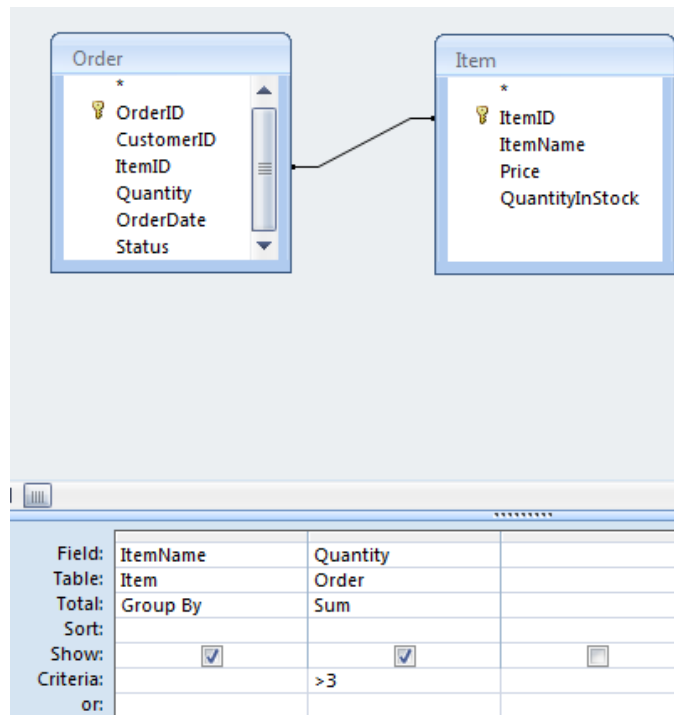


Aggregate Queries (2)



```
SELECT Order.ItemName, Sum(Order.Quantity) AS TotalQuantity
FROM Order, Item
WHERE Order.ItemID=Item.ItemID
GROUP BY Item.ItemName
```

Aggregate Queries (3)



```
SELECT Order.ItemName, Sum(Order.Quantity) AS TotalQuantity
FROM Order, Item
WHERE Order.ItemID=Item.ItemID
GROUP BY Item.ItemName
HAVING Sum(Order.Quantity)>3
```